

**Commonwealth of Kentucky
Division for Air Quality**

PERMIT APPLICATION SUMMARY FORM

Completed by: Massoud Kayvanjah

GENERAL INFORMATION:

Name:	Berea College
Address:	Rustic Road, CPO 2211 Berea, KY 40404
Date application received:	2/08/2008
SIC Code/SIC description:	8221, College
Source ID:	21-151-00006
Agency Interest:	39053
Activity:	APE20080003
Permit:	F-07-033 R2

APPLICATION TYPE/PERMIT ACTIVITY:

<input type="checkbox"/> Initial issuance	<input type="checkbox"/> General permit
<input checked="" type="checkbox"/> Permit modification	<input checked="" type="checkbox"/> Conditional major
__Administrative	<input type="checkbox"/> Title V
_X_Minor	<input type="checkbox"/> Synthetic minor
__Significant	<input type="checkbox"/> Operating
<input type="checkbox"/> Permit renewal formerly Title V	<input checked="" type="checkbox"/> Construction/operating

COMPLIANCE SUMMARY:

<input type="checkbox"/> Source is out of compliance	<input type="checkbox"/> Compliance schedule included
<input checked="" type="checkbox"/> Compliance certification signed	

APPLICABLE REQUIREMENTS LIST:

<input type="checkbox"/> NSR	<input checked="" type="checkbox"/> NSPS	<input checked="" type="checkbox"/> SIP
<input type="checkbox"/> PSD	<input type="checkbox"/> NESHAPS	<input type="checkbox"/> Other
<input type="checkbox"/> Netted out of PSD/NSR	<input type="checkbox"/> Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

- ☐ Acid rain source
- ☐ Source subject to 112(r)
- ☐ Source applied for federally enforceable emissions cap for VOC
- ☐ Source provided terms for alternative operating scenarios
- ☐ Source subject to a MACT standard
- ☐ Source requested case-by-case 112(g) or (j) determination
- ☐ Application proposes new control technology
- ☐ Certified by responsible official
- ☐ Diagrams or drawings included
- ☐ Confidential business information (CBI) submitted in application
- ☐ Pollution Prevention Measures
- ☐ Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

Pollutant	Actual (tpy)	Potential (tpy)
PM/PM ₁₀	1.2	66.5
SO ₂	0.06	8
NO _x	11	28.5
CO	9.2	18.5
VOC	60.5	270.6
Single HAP	9	40
Source wide HAPs	14.4	65

PRESENT ACTIVITY: F-07-033 R2

The Division received a minor revision application from Berea College (Berea) on August 14, 2008, to correct and update the insignificant activities based on internal audit performed by the institution.

Based on the information contained in the application, the indirect heat exchanger with capacities less than 1 MMBtu/hr have been moved to Section B of the permit and identified as emission unit 09-b. The remaining insignificant units will are still in Section C of the permit. Although the small indirect heat exchangers have been moved to Section B, there will be no emission limit applicable to them, however, the source shall monitor and keep record of the fuel usage. The source wide emissions limit and the applicable regulations remain unchanged.

PAST ACTIVITIES:**MINOR PERMIT REVISION - F-07-033 R1**

The Division received a minor modification from Berea on February 07, 2008, for the installation of three new natural gas fired boilers and two new natural gas fired hot water heaters. The boilers heat capacities are 1.36 MMBtu/hr (EU 09), 0.69 MMBtu/hr, and 0.75 MMBtu/hr, and the hot water heaters are rated at 0.199 MMBtu/hr each. The two existing boilers rated at 6.25 MMBtu/hr each (EU06-01 & EU06-02), will eventually be removed from the source after the new units are in operation. The new unit (EU09) is subject to the applicable state or federal regulations in the Conditional Major permit, and the source wide emissions cap will stay unchanged.

SOURCE DESCRIPTION:

Berea College submitted a renewal and reclassification application to the Division on May 10, 2007, and supplemental information on June 07, 2007 and July 06, 2007, based on notice of deficiency issued on May 21, 2007. The facility currently operates under operating permit V-03-005 R2 that will expire on May 13, 2008. The reclassification is based on decommissioning and removal of two coal-fired units, EP-01 & EP-02 (rated at 107.7 and 71.8 MMBtu/hr) and two natural gas fired units EP-03 & EP-05 (rated at 52.4 and 50.0 MMBtu/hr). These eliminations have reduced the source wide emissions of all regulated air pollutants below the major source threshold; hence this permit is being issued as federally enforceable permit for non- major source (Conditional Major) instead of renewing the existing Title V permit. The facility is currently operating the two remaining large boilers 18 MMBtu/hr (EU08-01 & 02), each on natural gas with a back up fuel oil, two 6.25

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MMBtu/hr (EU06-01 &02), one 1.26 MMBtu/hr (EU-07) and one 0.75 MMBtu/hr (Insignificant Activity NO. 23) all on natural gas. Basically, emission of regulated air pollutants from the boilers is below fifty tons per year; however, the paint booth has a utilization capacity of a major source to generate volatile organic compounds (VOC) above 100 tons per year. Considering the combined annual potential emissions of the heating system plus the rated potential of the furniture paint booth for VOC emissions (EU-04), Berea College has the potential to exceed major source thresholds for the VOC pollutants and HAPs. Therefore the facility has requested a source wide annual emissions limit for VOC, single HAP, combined HAPs to preclude the applicability of 40 CFR 63 Subpart JJ National Emission Standards for Wood Furniture Manufacturing Operations and 40 CFR 63 Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Industrial, Institutional Boilers and Process Heaters.

EMISSIONS AND OPERATING CAPS DESCRIPTIONS:

Maximum annual source wide VOC emissions from the spray booth and the boilers shall not exceed 90 tons/year. Maximum single HAP (Toluene) emissions shall not exceed 9 tons per year and combined HAP shall not exceed 22.5 tons per year

OPERATIONAL FLEXIBILITY:

None